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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,041	06/22/2005	Jurgen Heeseman	P26812	5733
7055	7590	09/07/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			MULLER, BRYAN R	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,041

Applicant(s)

HEESEMAN, JURGEN

Examiner

Bryan R. Muller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6,8,10,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,9,11,13 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/18/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the claim is intended to be independent or dependent on claim 1. The claim is a method claim, which does not provide any further structure to claim 1, but recites "the machine as claimed in claim 1" which leads to believe that the claim is dependent on claim 1. It is assumed by the examiner that the applicant intended for the claim to be an independent method claim, in which case, the claim should include all of the limitations of claim 1, written out in full.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7, 13, 16, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costa et al (6,299,512) in view of Herchenrider (2,162,279).
5. In reference to claim 1, Costa discloses a sanding machine having oscillation drive means (50, 56, 38A and 38B) for setting an abrasive in an oscillating sanding

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movement but Costa fails to disclose an activating device having a multiplicity of activating regions triggered in such a way that various regions of the abrasive are alternately pressed onto a work piece by the activating regions independently of the oscillating sanding movement. Herchenrider discloses a sanding machine, similar to the Costa machine and discloses that the roller (27) that presses the abrasive against the work piece has a multiplicity of activating regions (29 or 31) and that the separate regions allow the abrasive to conform to uneven or irregular areas on the surface being ground (page 1, lines 40-44), which is advantageous to provide an evenly ground surface on a work piece. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the lower, pressure roller (24) of Costa with the roller of Herchenrider, to allow for the abrasive to conform to uneven or irregular areas on the surface being ground, as taught by Herchenrider. The regions of the roller of Herchenrider will inherently alternately activate various regions of the abrasive, and the regions are activated due to the rotation of the roller about its own axis, so the regions are activated independently of the oscillating movement.

6. In reference to claim 2, the obvious combination of Costa and Herchenrider will inherently bring the activated regions into use asynchronously relative to the oscillating sanding movement.

7. In reference to claim 3, the obvious combination of Costa and Herchenrider would further inherently disclose that the activating device can be moved transversely to a feed direction of the work piece to be sanded because the activating device is attached to the shafts causing the oscillating movement, thus the activating device will

also be oscillating, which inherently provides motion transverse to the feed direction.

Further, the Costa reference discloses lifting mechanisms 72A-D that raise or lower the entire sanding device, including the lower roller (24) which will be the activating device, in view of Herchenrider, with respect to the sanding plane, thus providing additional movement that is transverse to the feed direction of the work piece.

8. In reference to claim 4, Herchenrider further discloses that the activating regions (29 or 31) are raised lamellae on a carrier (28).

9. In reference to claim 7, Herchenrider further discloses that the activating regions extend in a form of raised lamellae on a sanding plane diagonally (fig. 4) or are offset one behind the other (figs. 3 or 4).

10. In reference to claim 13, Costa and Herchenrider further discloses that the abrasive is a sanding sheet interchangeably connected to the retaining device.

11. In reference to claim 16, the obvious combination of Costa and Herchenrider will inherently provide a method of sanding a work piece using the sanding machine of claim 1 by oscillating sanding movements, comprising alternate activation of various activating regions of the abrasive independently of the oscillating sanding movement by pressing the activating regions onto the work piece.

12. In reference to claim 17, the obvious combination of Costa and Herchenrider, as discussed supra, discloses a retaining device mounted to a frame by at least one displaceable eccentric shaft for setting an abrasive in an oscillating sanding movement with respect to a work piece; and an activating device which is activated independently of the oscillating sanding movement, the activating device having a multiplicity of

activating regions such that the independent movement of the activating device alternately activates various regions of the abrasive.

13. In reference to claim 20, the obvious combination of Costa and Herchenrider, as discussed supra, further discloses that at least one of the eccentric shafts comprises a bearing arrangement which is displaceable in one direction of a sanding plane configured to at least one of compensate for linear expansions and to reduce bearing load. Costa discloses actuators 40A and 40B, which are used to raise and lower one of the pressure rollers to compensate for linear expansion, and it would thus further obvious that the eccentric shaft must comprise some type of bearing arrangement that is displaceable in one direction of a sanding plane to allow the pressure roller to move in the same direction and compensate for the linear expansion.

14. Claims 1, 2, 4, 5, 7, 9, 11, 13 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (2,586,848) in view of Costa et al (6,299,512).

15. In reference to claim 1, Miller discloses a sanding machine comprising an activating device (135) having a multiplicity of activating regions (125) triggered in such a way that various regions of the abrasive are alternately pressed onto a work piece by the activating regions independently of the sanding movement but Miller is silent as to the specific drive mechanism for the abrasive and fails to disclose that the sanding machine has an oscillation drive means for setting an abrasive in an oscillating sanding movement. Costa discloses a sanding machine, similar to the Miller machine, that has an oscillation drive means (50, 56, 38A and 38B) for setting an abrasive in an oscillating

sanding movement and teaches that the oscillating motion provides a homogeneous sanding pattern that renders scratches normally created by an endlessly rotating sanding belt substantially unnoticeable (lines 18-20 of the abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the abrasive belt of Miller with the oscillating drive means of Costa to render scratches normally created by an endlessly rotating sanding belt substantially unnoticeable, as taught by Costa. This obvious combination would inherently provide a sanding machine comprising an oscillation drive means for setting an abrasive in an oscillating sanding movement and an activating device having a multiplicity of activating regions triggered in such a way that various regions of the abrasive are alternately activated independently of the oscillating sanding movement.

16. In reference to claim 2, the obvious combination of Miller and Costa will inherently bring the activated regions into use asynchronously relative to the oscillating sanding movement.

17. In reference to claim 4, Miller further discloses that the activating regions (125) are raised lamellae on a carrier (135).

18. In reference to claim 5, Miller further discloses that the carrier is a plate that can be moved in a sanding plane transversely to a feed direction of the work piece (W-2).

19. In reference to claim 7, Miller further discloses that the activating regions extend in a form of raised lamellae on a sanding plane diagonally and are offset one behind the other.

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20. In reference to claim 9, the obvious combination of Miller and Costa further discloses that the abrasive is mounted on a retaining device (121, 122) and the retaining device is mounted with the oscillation drive means on a sanding machine frame (34 of Costa) in order to set the retaining device, relative to a sanding machine frame, in a sanding movement oscillating parallel to a sanding plane, which is defined by a sanding surface of the abrasive (B-1 of Miller), wherein the activating device is coupled to the sanding machine frame (device would obviously be coupled to the frame to provide support and to be a part of the sanding machine) and is uncoupled from the retaining device at least in one direction of the sanding plane.

21. In reference to claim 11, Costa further discloses that the oscillating drive means has rotatably driven eccentric shaft (38A, 38B), which extend vertically with respect to a sanding plane, between the sanding machine frame (34) and the retaining device (121, 122).

22. In reference to claim 13, Miller and Costa further discloses that the abrasive is a sanding sheet interchangeably connected to the retaining device.

23. In reference to claim 16, the obvious combination of Miller and Costa will inherently provide a method of sanding a work piece using the sanding machine of claim 1 by oscillating sanding movements, comprising alternate activation of various activating regions of the abrasive independently of the oscillating sanding movement.

24. In reference to claim 17, the obvious combination of Miller and Costa, as discussed supra, discloses a retaining device, that would obviously be mounted to a frame, as discussed supra, by at least one displaceable eccentric shaft for setting an

abrasive in an oscillating sanding movement with respect to a work piece; and an activating device which is activated independently of the oscillating sanding movement, the activating device having a multiplicity of activating regions such that the independent movement of the activating device alternately activates various regions of the abrasive.

25. In reference to claim 18, Miller further discloses that the activating device is uncoupled from the oscillating movement.

26. In reference to claim 19, Miller further discloses that the activating device includes a carrier plate, which is freely displaceable in a sanding plane transversely to a feed direction of the work piece.

Allowable Subject Matter

27. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

28. Applicant's arguments filed 6/16/2006 have been fully considered but they are not persuasive. The applicant argues that the activation of the various regions of the abrasive is not independent of the oscillating sanding movement because the oscillating movement and rotational movement of the contact roller are directly coupled to one another. However, as discussed supra, the activation of the specific regions is caused by the rotational movement of the contact roller, not the oscillating movement, thus the

various regions would still be activated/de-activated if the oscillating movement were not applied to the device. Therefore, activation of the various regions is independent of the oscillating movement. The applicant also argues that no combination of Costa and Herchenrider provides movement of the activating device transversely to a feed direction of the work piece. However, as discussed supra, the oscillating movement of the roller and the vertical movement that may be imparted by actuators 72A-D both provide motion that is transverse to the feed direction of the work piece. The applicant additionally argues that the combination of the Miller and Costa reference fails to teach or suggest that various regions are alternately pressed onto a work piece by activating regions independently of the oscillating sanding movement based on the fact that Miller does not disclose an oscillating movement. The examiner agrees that Miller does not disclose an oscillating movement, which is the reason that the Costa reference is applied to teach the advantages of an oscillating movement and make it obvious to provide an oscillating movement to the sanding mechanism of Miller. The applicant further argues that the combination of Miller and Costa would not be obvious because Costa teaches sanding at the bottom of a lower contact roller and Miller teaches that sanding occurs at the platen disposed at an intermediate portion of the belt between the rollers. However, Costa teaches the advantages of oscillating movement applies to a rotational movement of a belt type sanding device and it would be clearly obvious that the same advantages may be provided regardless of the location of contact between the work piece and the sanding device. Further, the apparatus provided by Costa would obviously provide oscillating movement for the entire belt of Miller, including the portion

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that is supported by the platen, without destroying the operability of the movement of the platen to alternatively activate regions of the sanding belt. Applicant argues that the oscillating movement of the belt would be detrimental, and provides reasons that are merely speculative, are not disclosed by any prior art reference and may only cause issues under particular circumstances. Thus, neither of the references teach away from the combination for the reasons the applicant provides, and the examiner maintains the position that the combination of the Miller and Costa references, as applied to the applicant's claimed invention would be found obvious by one of ordinary skill in the art. Applicant also argues that modification of Miller in view of Costa would provide oscillating movement that is perpendicular, not parallel to the sanding plane. However, the combination would clearly provide side-to-side oscillating motion with reference to the plane of the sanding surface, and thus parallel to the sanding plane. Finally, the applicant argues that it would not be inherent that the activating device be coupled to the machine frame. The examiner does agree that this may not be "inherent" but it would clearly be obvious that the activating device be coupled to the machine frame because it is part of the machine and it would be obvious to support the entire machine with the same frame to allow the entire apparatus to be moved as a whole. The applicant provides the argument that the platen and drive mechanism could be coupled to a floor and the frame could be a separate system that is coupled to a ceiling. However, even if this were the case, the entire apparatus is essentially attached, via the parts of the building, as would be obvious and further, the building may be considered to be the frame, in which case the activating device would be coupled to the frame. In

view of the above discussed argument and responses provide by the examiner, the rejections made in the previous office action and discussed supra are maintained.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan R. Muller whose telephone number is (571) 272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BRM *BRM*
9/5/2006

ROBERT A. ROSE
PRIMARY EXAMINER
ART UNIT 3723

